NATIONAL ECONOMIC DEVELOPMENT OFFICE

ACTION ON THE BANWELL REPORT

A survey of the implementation of the recommendations of the Committee under the chairmanship of Sir Harold Banwell on The Placing and Management of Contracts

A report by a working party of the Economic Development Committee for Building

LONDON: HER MAJESTY'S STATIONERY OFFICE 1967

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Foreword

by the Economic Development Committee for Building

This report was prepared for the Economic Development Committee for Building by a working party under the chairmanship of Mr P G Potts. The committee authorised its publication at its meeting on 12 May, 1967.

The committee welcomes the report and hopes that it will lead to effective action. It recognises that translating findings and recommendations into practice requires not only action on the part of those to whom the recommendations are addressed, but also a process of precept and education. The members of the EDC *in their various capacities all mean to play their part in this process as well as in directly implementing the report where they are in a position to do so.*

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For convenience the chapter headings are those used in the Banwell Report.

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Preface

by tha working party

In July 1965 the Economic Development Committee for Building appointed us as a working party on the implementation of the report of the committee, under tbe chairmanship of Sir Harold Banwell, on '*The Placing and Manngement of Contracts for Building and Civil Engineering Work*' (HMSO 1964).

Our terms of reference were:

(i) *To consider the progress and adequacy of the measures taken, or contemplated, for the implementation of the Banwell committee report, insofar as they relate to the building industry.*

(ii) *To consider any other relevant aspects of the placing and management of contracts for building.*

(iii) *To submit reports and recommendations on these matters to the Economic Development Committee for Building as appropriate.*

At the same meeting the EDC asked us to pay particular attention to the effect of variations from the original contract on the productivity of the industry.

The Banwell report has been accepted with one or two exceptions by government and by the industry. We were not set up to reconsider its recommendations. Our task bas been, rather, to examine how far its recommendations have been put into practice, to assess whether enough has been done to meet the intentions of the Banwell committee and, wbere its recommendations are still unfulfilled, to suggest wbat should now be done to fulfil them. We have dwelt more on the areas where implementation is still needed tban on those where good progress has already been made.

We wish to make three general observations on our work. First, the Banwell committee's recommendations and conclusions are not always specific or precise, and so we have had to interpret some passages in the report for ourselves. Second, the Banwell report deals with the complex pattern of relationships in the construction industry—relationships involving clients of all kinds as well as contractors, sub-contractors, operatives and professional men—and we believe that no prescription can be right for all time for an industry in which tbe pattern of these relationships is bound to evolve. We see therefore the implementation of the Banwell report as a continuing process. Finally, although we believe we have covered in our report all the points of substance, some of the Banwell committee's recommendations are clearly more important tban otbers, and we have been selective in our approach. Our report follows tbe Banwell report cbapter by chapter, and for convenience our chapter headings are the same.

The conclusions and recommendations we make represent the consensus of opinion within the working party. Although we approached the subject from diverse points of view we have nevertheless been able to reach agreement on most of tbe subjects we discussed. At certain points however our views are those of the majority and are not necessarily unanimous. We must also mention that we were appointed as individuals and it is as individuals that we put our names to this report.

P G Potts (*chairman*)
A T Brett-Jones
D M Chaston
K C F Foster
The Lord Holford
J P Inglis
L E Kent
I McIntyre
D C Mallam*
R J Meddings
W O Ulrich
C E D Wooster
N P Pettinati (*secretary*)

May 1967

**At the time of publication of this report, the Federation of Associations of Specialists and Sub-Contractors are in dispute with the Joint Contracts Tribunal with regard to the representation of the Federation on the Tribunal. Whilst this problem remains unresolved Mr Mallam is unable to associate himself with any findings and recommendations of the working party which attribute a role to the Joint Contracts Tribunal.*

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1 General observations

1.1 In the first short chapter, which is the most important in the report, the Banwell committee outlined the main problem, namely that 'the various sections of the industry have long acted independently.' And this chapter includes what is probably the most important single sentence in the committee's report: 'While we make suggestions for alterations in practices and procedures, these will be of no avail until those engaged in the industry themselves think and act together' (para 1.2).

1.2 This is a sort of leitmotif running throughout the Banwell report. The committee considers that the quality of co-operation within the team, rather than the identity of its leader, is really important. It quotes the Emmerson[1] dictum: 'in no other important industry is the responsibility for design so far removed from the responsibility for production'; points to the need for more joint training for those engaged in design and those engaged in construction; emphasises that the contractor should in certain cases be brought into the team before the design is finished and the programme of work finally settled; and considers that when the Royal Institution of Chartered Surveyors reviews the form and content of bills of quantities representatives of the architects, engineers and builders, should be brought in to collaborate at the earliest possible stage. In the chapter on sub-contracting the Banwell committee returns to this theme: 'In considering the problems which affect sub-contractors we again find it necessary to emphasise the importance of building as the product of a team rather than of a number of individuals or firms working without cohesion' (para 7.2). All the Banwell recommendations bear upon the general objective of thinking and acting together.

1.3 The Banwell report made only one specific recommendation in chapter 1: that the Ministry of Public Building and Works should confer with all the interests concerned to bring about 'the necessary co-ordination'. The Ministry of Public Building and Works did not accept this recommendation. It has believed all along that it is up to the industry, not the Government, to create a body to do this. Be that as it may, no such body has been created. We do not regard our own working party as meeting this Banwell recommendation. The implementation of the Banwell report is an evolving matter; it is not something which can be dealt with by a working party with a finite life. In the following paragraphs we review the existing machinery for joint consultation in the industry and discuss how it has developed to meet the Banwell requirement.

The National Joint Consultative Committee

1.4 The only existing body which approximates to what the Banwell committee appears to have had in mind is the National Joint Consultative Committee of Architects, Quantity Surveyors and Builders (NJCC), whose membership includes the Royal Institute of British Architects, the Royal Institution of Chartered Surveyors and the National Federation of Building Trades Employers. The terms of reference of the NJCC limit its powers considerably. Furthermore its secretariat is not full-time nor is it independent of the constituent parties. It provides a useful forum for discussion of some of the industry's problems and has taken some enterprising initiatives, notably the study into communications commissioned from the Tavistock Institute.[2]

1.5 Fundamentally however, the NJCC falls short of what Banwell had in mind, because engineering and sub-contracting interests are not represented. The NJCC has been giving consideration for some time to its composition. We are sure that if sub-contractors were members of bodies which decide or discuss questions that affect their interests, relationships in the industry would be less troubled. Although this would not of itself produce better relations on site between the main contractor and the sub-contractors, what it would produce is the right climate for greater understanding at national level. If the NJCC were to broaden its membership we can see that there is a danger that it might become unwieldy and ineffective. We believe that it ought to be possible to avoid this difficulty by allocating the work to appropriate sub-committees. *We urge the NJCC to press ahead quickly with its review of membership. We believe that it should also have a full-time secretariat independent of its constituent parts.*

The Joint Contracts Tribunal

1.6 The Joint Tribunal for the Standard Form of Building Contract (JCT) is responsible for preparing and publishing the RIBA Form of Contract, one of the three forms of contract widely used for building and civil engineering work. The membership of the JCT consists of representatives of the Royal Institute of British Architects, the Royal Institution of Chartered Surveyors, the National Federation of Building Trades Employers, the County Councils' Association, the Association of Municipal Corporations, the Greater London Council, the Urban District Councils' Association, the Rural District Councils' Association, the Scottish Building Contract Committee, and more recently, the Committee of Associations of Specialist Engineering Contractors and the Federation of Associations of Specialists and Sub-Contractors.

1.7 *The representation of sub-contractors' organisations on the Joint Contracts Tribunal is an important and valuable step towards implementation of the*

[1] *Survey of Problems before the Construction Industries* (1962) A report prepared for the Minister of Works by Sir Harold Emmerson.

[2] A digest of the study was published in 1966 under the title: *Interdependence and Uncertainty: A study of the Building Industry by the Tavistock Institute.*

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Banwell committee's recommendation (para 7.18) FASS *has not yet taken up membership because of disagreement with the Tribunal over their nomination. In the interests of the industry the difficulty should be quickly resolved.'*

The National Consultative Council

1.8 The National Consultative Council which meets under the chairmanship of the Minister of Public Building and Works, is a body which enables the different sides of the industry to meet together. Its membership consists of the National Federation of Building Trades Employers, the Federation of Civil Engineering Contractors, the Association of Consulting Engineers, the Royal Institute of British Architects, the Royal Institution of Chartered Surveyors, the Institution of Civil Engineers, the Scottish National Building Trades Federation, the National Federation of Building Trades Operatives, the Civil Engineering Contractors Conciliation Board, and the Federation of Registered House Builders.

1.9 The Minister has informally discussed with FASS the possibility of the Federation becoming members of his Council. FASS is willing to take up membership provided that it can retain its separate liaison meetings with the Ministry. *We consider that the Minister's approach to* FASS *is wholly within the spirit of the Banwell report and would regard it as advantageous if the sub-contractors' organisations were members.*

Other forms of co-operation

1.10 Several recent developments should help to promote closer co-operation. A liaison committee was established in 1965 between the NFBTE and FASS, CASEC joining in 1966. In addition the creation in 1963 of the Joint Building Group[1] has provided a forum for informal discussions about the industry among people from all sections. Furthermore members of different professions are increasingly working together to offer a combined service.

Conclusions

1.11 These developments are encouraging. They are not however likely to lead to the fundamental changes in attitudes and relationships which the Banwell committee sought. *We have made recommendations for widening and strengthening the National Joint Consultative Committee which if implemented will go a long way to meeting the need for improved consultative machinery. Should it not be possible to go ahead on the lines we suggest, new machinery would need to be evolved with a permanent secretariat, if necessary with government support. The Economic Development Committee should initiate appropriate action.*

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[1]The following organisations participate in the Joint Building Group

- The Institute of Building
- The Institution of Civil Engineers
- The Institution of Electrical Engineers
- The Institution of Heating and Ventilating Engineers
- The Institution of Mechanical Engineers
- The Institution of Structural Engineers
- The Royal Institute of British Architects
- The Royal Institution of Chartered Surveyors
- The Building Research Station
- The Association of Consulting Engineers
- The Faculty of Building
- The Federation of Civil Engineering Contractors
- The Institution of Gas Engineers
- The Institution of Municipal Engineers
- The Institution of Plant Engineers
- The Institute of Quantity Surveyors
- The National Federation of Building Trades Employers
- The Reinforced Concrete Association
- The Society of Architectural and Associated Technicians.

All other organizations of similar standing in the construction industry are eligible to be similarly associated with the Group.

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2 The team in design and construction

2.1 In this chapter, the Banwell report contains a number of recommendations on the theme of thinking and acting together. We examine each recommendation in turn to see what action has been taken. We also discuss the subject of variations, a problem which was specifically referred to us by the Economic Development Committee for Building.

The importance of time

Recommendation 2a, 'Those who spend money on construction work seldom give enough attention at the start to defining their own requirements and preparing a programme of events for meeting them. Insufficient regard is paid to the importance of time and its proper use'.

2.2 This recommendation will be fulfilled only if clients are better informed about the effect of their action on other parties and the consequences to themselves. Suggested practice has been set out in a number of documents. These are:

(i) 'Plan before you Build' published by the NJCC, 1955
(ii) 'Building Project Management—a Guide to Procedure' published by the NJCC 1963
(iii) 'Plan of Work for Design Team Operation' (known as 'Plan of Work') which is a section of the RIBA's, Handbook of Architectural Practice and Management, published 1964
(iv) 'Preparing to Build' published by the Ministry of Public Building and Works, 1965

2.3 All these documents deserve to be more widely known and to be given wider circulation. 'Preparing to Build' has been circulated to local education authorities by the Department of Education and Science and to regional hospital boards. It has not been circulated however to all local authorities, nor to other public authorities. *We recommend that copies of 'Preparing to Build' be circulated by the appropriate government departments to all building clients in the public sector, even at the risk of some duplication: and that sufficient publicity be given to it to ensure that major clients in the private sector will also be aware of its importance.* The 'Plan of Work' in addition to its wide circulation to architects has been given limited circulation by the RICS. *We recommend that the NJCC consider how to publicise and encourage the wider use of all these documents in the industry and by clients.*

Work standards

Recommendation 2b, 'Work of any kind, however small, should be carried out to a recognised standard'.

2.4 There has been some progress, especially in the housing field following the work of the National House Builders Registration Council. The council sets standards for certain measurable items such as structural specifications, heating and insulation standards, socket outlets, storage space *etc.* The council also requires that the whole of the work in the construction of a dwelling shall be carried out in a reasonably sound, neat, workmanlike and durable manner. At present about 60—70 per cent of all houses in the private sector come within the scheme. Another body concerned with work to recognised standards is the Electrical Contractors' Association. The association operates a guarantee of work scheme on behalf of its members and the standards adopted are those laid down by the Institution of Electrical Engineers.

2.5 The establishment of a national register of builders available to anyone interested in placing work, would also help to improve standards. The register could indicate the size of job which a firm was capable of undertaking as well as trades in which it was specialist.

The design team and the place of the contractor

Recommendation 2c, 'As the complexity of construction work increases, the need to form a design team at the outset, with all those participating in the design as full members, becomes vital. Design and construction are no longer two separate fields, and there are occasions on which the main contractor should join the team at an early stage'.

2.6 We asked the National Federation of Building Trades Employers to consult a small number of their members about the extent to which co-operation now takes place at the design stage between those engaged in design and those engaged in construction. It emerges that for traditional building it is doubtful whether the contractor is now more likely to be brought in at the design stage than when the Banwell report was published. There has been an increase in system building and where the system has been developed by the contractor, there is necessarily integration between design and construction. This is not so where the system has been developed by a client, for instance by a consortium of local authorities. System building is not however likely to be the predominant method for many years and we are sure that more progress should be made with this recommendation in traditional building. Without claiming that the recommendation is appropriate to all types of work, *we recommend that there be more experiment in the early collaboration of the contractor in the design team. The Ministry of Public Building and Works should initiate experiments in the public sector and issue guidance to the industry generally.*

The professions

Recommendation 2d, 'Restrictions on the activities of members of the professional institutions need re-examination'.

2.7 Under the present rules of the RIBA and the Architects Registration Council, an architect is permitted to become an employee of a contracting firm, but if he becomes a director he loses membership of the RIBA and may no longer call himself an

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architect. A member of the RICS is not allowed to become an employee or director of a contracting firm and retain his membership of the Institution.

2.8 Since the publication of the Banwell report in 1964, both the RIBA and the RICS have been carrying out re-examinations of their professional rules. Neither has yet reached any firm decision and although the climate of opinion within these bodies may be changing, the situation remains outwardly as it was when the Banwell committee reported. *We consider that the* RIBA and RICS *should complete their review of professional rules quickly and take action which will meet the spirit of the Banwell committee report.*

Training and site management

Recommendation 2e, 'The relationship between those responsible for design and those who actually build must be improved through common education. Much more attention should be given to the training of site agents'.

Joint education

2.9 The idea of joint education in building is not new. It was examined twelve years ago by a sub-committee of the NJCC which concluded that a common syllabus for first qualifications was not practicable; the greatest scope lay in joint education at a later stage after several years' experience in the industry. The subject was further examined on the initiative of the NJCC by a committee under the chairmanship of Sir Noel Hall. The principal recommendations of the committee's report[1] published in November 1964 were first that the four institutions—the Royal Institute of British Architects, The Royal Institution of Chartered Surveyors, the Institution of Structural Engineers and the Institute of Building—should adopt minimum common syllabuses; and second, that they should set up and maintain a permanent advisory body on education and professional training.

2.10 The recommendations of the Noel Hall committee have not yet been carried out. There are a number of difficulties standing in the way. Courses and examinations for architects and for some engineers are arranged by universities and colleges of further education, although they must meet the minimum requirements of the institutions, whereas quantity surveyors and builders generally qualify through examinations set by the institutions themselves. Secondly, courses for architects and engineers are more often in universities. Fifteen universities have courses for architects and fourteen have courses for structural engineers; only eight universities offer courses in construction and building management, and only two in quantity surveying and building economics. Even where education is available in the same type of establishment, the courses for architects, structural engineers, quantity surveyors and builders are not always offered within the same college or in the same district. There is thus little extra-curricular meeting. Finally, there is the problem that the courses are already long and the introduction of some joint education would either lengthen them or affect the balance of subjects.

2.11 Despite the difficulties there has been some progress. Several universities including Bath, Belfast, Nottingham and Sheffield offer or will shortly offer courses in more than one building subject (architecture, quantity surveying, structural engineering and building technology). The Bartlett School of Architecture, University College London, offers a degree course common to architecture, building and town planning. The University of Manchester has a degree course in building technology which combines an option in building economics. The Hammersmith College of Art and Building offers a common first year course for students who will later specialise in architecture, surveying and building. The RIBA and the Council of Engineering Institutions[2] are considering together the need for experiments in joint education in selected schools.

2.12 The Noel Hall Report has clearly had a valuable influence on the development of joint education. On the assumption that progress will continue we do not believe that an advisory council is essential. We attach greater importance to the provision of joint courses for qualified and experienced men.

2.13 We recommend:

(a) *that the Department of Education and Science, the University Grants Committee and the various professional institutions should try to ensure that training in the several disciplines of the building industry takes place within the same establishment, and where possible with common syllabuses or parts of syllabuses*

(b) *that the* RIBA *should take a lead in setting up a clearing house between the various professional institutions for the exchange of information on educational policy and developments in joint training.*

(c) *that the* NJCC *should take the initiative in reconvening its sub-committee on post qualification training and include on it representatives of the Council of Engineering Institutions and that it should consider the establishment of a management college for the whole industry along the lines of the Ashorne Hill Management College organised and run by the steel industry.*

Site agents

2.14 The Banwell report placed particular emphasis on the training of site agents. We support the prominence the Committee gave to this matter because of the key role which site agents play in the construction process. The implementation of the Banwell recommendation on the training of site agents is a matter for the Construction Industry Training Board (CITB) and we have drawn the Board's attention to this. The Board is establishing with the help of the Building Advisory Service, what is the proper function of site agents in order to draw up a training programme for them. The Board hopes to establish a day release scheme and to provide a national syllabus in site supervision in association with the National Examination Board

[1] *Report of the Joint Committee on Training in the Building Industry, NJCC 1964.*

[2] The fourteen members of the Council are:

The Royal Aeronautical Society
The Institution of Chemical Engineers
The Institution of Civil Engineers
The Institution of Electrical Engineers
The Institution of Electronic and Radio Engineers
The Institution of Gas Engineers
The Institute of Marine Engineers
The Institution of Mechanical Engineers
The Institution of Mining Engineers
The Institute of Mining and Metallurgy
The Institution of Municipal Engineers
The Royal Institution of Naval Architects
The Institution of Production Engineers
The Institution of Structural Engineers

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for Supervisory Studies. The Banwell committee's recommendation that much more attention be given to the training of site agents is being pursued.

Variations

2.15 The Building EDC asked us to pay particular attention to the problem of variations. The Banwell report made no recommendation on this subject but commented in chapter 2 that 'it would be to the benefit of the whole industry if the impact of claims was substantially reduced'. (para 2.3). The problem as we see it is not the elimination of variations. Indeed, we regard variations as being endemic to the building process and it is foolish to condemn them out of hand. If a client, half way through the contract, decides that a building is of no use to him in the original design form, then there is no point in continuing to build it in that form. What we have sought in our discussions is a means of reducing the incidence of variations, which we are convinced would be immensely beneficial to the productivity of the industry.

2.16 We have approached this problem from three main directions which may be broadly described as educational, financial and contractual. These are not mutually exclusive; we think that progress might be made on all three fronts simultaneously.

2.17 There are many different causes of variations. Some arise from unforeseen changes in circumstances —unexpected site or ground conditions, labour difficulties, shortage or increased cost of materials, new building techniques or new materials available after completion of the design stage. Others are caused by lack of decision or late decision by the client or designer or by the client changing his mind about what he wants. Such variations are often the result of a lack of proper communication between the parties: contractors may not have asked for detailed information early enough; the client may not have briefed the architect properly about his requirements. Liaison between contractor, designer and client is especially difficult where the client is represented by a committee comprising different and sometimes conflicting interests, as with hospitals and universities. Late decisions may arise from over-optimistic programmes, from delays in the provision of information by third parties, from delays imposed by statutory undertakers, or from the late appointment of sub-contracting trades whose work includes an element of design.

2.18 Variations have different effects. Some result in greater efficiency, but the vast majority impede the progress of a job and reduce productivity. Even where demolition and rebuilding are not required, variations delay the orderly progress of contracts. We consider that many variations are unnecessary and could be avoided if clients were more aware of the effect of their decisions, or lack of them on others. One common characteristic of almost all variations is that there has been insufficient forethought before starting work on site. Time spent on preparation before actual commencement of work on site is time well spent. Wider adherence to systematic methods such as those outlined in the publications we refer to in paragraph 2.2, particularly the 'Plan of Work', would undoubtedly help. The reduction of variations requires better pre-contract programming which will be carried out only if the parties themselves understand the full consequences of interrupting a programme. The RIBA has prepared a pamphlet 'Working with your Architect', which among other things advises clients of the desirability of avoiding variations because of the dislocation they cause. We hope that architects will bring this pamphlet to the attention of clients, particularly where major projects or new clients are involved.

2.19 A particular class of variations arises from the interests of 'fringe parties', such as electricity, gas and water authorities and fire brigades. The designer must pay attention to the interests and requirements of these bodies and it is his responsibility to clear the design at an early stage with those statutory undertakers which might be affected. But these 'fringe parties' are sometimes unaware of how important it is that they should make their observations quickly and decisively, and stick to them. *We therefore recommend that the Ministry of Public Building and Works consider the preparation of a special version for statutory undertakers of its handbook 'Preparing to Build'.*

2.20 Our second approach to variations was to ask whether the client pays enough for them. Some of us feel that a client who introduces a variation after a contract has been let should be made to pay a premium for the privilege of doing so. By 'premium' we mean something which is over and above the true cost of the variation, including the cost of any disturbance to the original programme. Most of us feel that there is no case for such a premium, and even if there were it would be extremely difficult to operate. Ideally the system should ensure that the client, no less than any other member of the community, should pay the true full cost of what he chooses to ask for. There seems to us to be no special reason in the particular context of variations in the construction industry to ask for more than the true full cost to be paid.

2.21 Under the RIBA contract the procedure for valuing variations is as follows: where the work is of a similar nature and is to be executed under similar conditions to the original work, the prices in the bill of quantities are used (clause 11.4a). Where the work is not of a similar nature or is not executed under similar conditions, the prices in the original bill of quantities are used where possible and failing this a 'fair' valuation is arrived at, generally being negotiated between the quantity surveyor and builder (clause 11.4b). Where the work cannot be properly measured or valued beforehand, day work rates, based on time spent and materials consumed, are used (clause 11.4c). Overhead costs are normally included in the bill rates but where the variation results in additional expense not already provided for, for example disturbance to the programme of work, an additional payment may be made if the architect agrees (clause 11.6).

2.22 Thus in theory the RIBA form provides an equitable means of payment for variations. But in practice the mechanism does not always function smoothly. One reason for this may derive from over-use of clause 11.4a; the nature of the variation or the conditions under which it is carried out may not be similar to the original item in the bill of quantities, even though it may appear to be so. For example, it may make a considerable difference to a builder whether he lays bricks today or lays them next week. If the builder has a programme of work and can demonstrate to the quantity surveyor the effect of any interruption to that programme caused by a variation order, then payment may be negotiated

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within the terms of clause 11.4b on the grounds that the conditions of work are not similar. Alternatively the builder may claim under clause 11.6 for re-imbursement of extra cost involved. More frequently however the builder cannot demonstrate the effect in measurable terms of an interrupted programme and is therefore unable to recover payment for such disturbance. This difficulty applies no less to sub-contractors.

2.23 Another weakness of the system is the reliance placed on the rates in the bill of quantities and the assumption that each item of the bill as originally priced fully reflects the cost of that part of the work. In practice this may not be so even though the total sum of the items does. The quantity surveyor may therefore have to make a valuation using prices which he knows do not wholly reflect the true costs involved. We think that both these points go a long way to explain the strong feelings frequently associated with the pricing of variations.

2.24 The first cause of frustration, namely the builder's inability to demonstrate the measured effect of an interrupted programme, leading to excessive use of clause 11.4a, would be eased if builders had more explicit programmes for their contracts and were willing to produce these as evidence to the quantity surveyor wherever a variation order had the effect of interrupting a programme, *We recommend that the* NFBTE *should advise its members that it is in their own interests to have explicit programmes for their work and that it should give guidance on the best methods: the benefits would extend well beyond payment for variations.* We discuss the second area of friction, namely reliance on bill rates which do not always reflect true costs, in para 6.4 (which deals with cost analysis from bills of quantities) where we recommend among other things that there should be greater uniformity in the presentation and pricing of preliminaries. If this can be achieved the pricing of variations will cause less trouble.

2.25 For these reasons it is probable that clients do not always pay the true full cost of variations. If clients were charged the full cost, which in many instances would be very high, the incidence of variations would be less. Additionally therefore to our other recommendations, *we recommend that the Joint Contracts Tribunal should consider the operation of Clause 11 of the* RIBA *form to see whether its intentions are being met in practice: if necessary Clause 11 should be revised.*

2.26 Thirdly, we considered a contractual approach to the reduction of variations. A form of building contract could be drawn up to include two alternative clauses governing variations: one would cover the categories of work in which it is recognised that variations are likely; the other would stipulate that variations are not contemplated. Invitations to tender would make clear which clause was to apply. If the 'no variations' clause was specified, the builder would probably submit two tenders. The lower would apply if there were no variations. The higher would apply if there were variations. The difference between the tender sums would represent the disturbance cost to the builder. Individual variations would be charged additionally. *We recommend that the Joint Contracts Tribunal examine the feasibility of a contractual solution to variations on these or other lines.*

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3 Appointing the contractor

3.1 This chapter of the Banwell report is largely concerned with methods of tendering, the effect of the methods on efficiency and the factors which influence the choice of method. Open tendering has traditionally fulfilled the requirements of public accountability but the report refers to two serious drawbacks. First, there is the observation of the Simon Committee[1] that 'low prices resulting from indiscriminate tendering result in bad building'; second, resources are wasted when many firms tender for the same job. The Banwell committee particularly stresses the former point: 'There are most powerful arguments for limiting invitations to tender to a realistic number of firms, all of whom are capable of executing the work in question to a recognised standard of competence'. (para 3.5).

3.2 The report observes that although open competition was strongly criticised it remained in widespread use. Other methods such as selective tendering[2], negotiation[3], package deals[4], two-stage selection[4], serial contracting[5] and continuation contracts[6] had many advantages but were insufficiently used partly because of 'rigid adherence to outmoded procedures'.

3.3 Our primary task has been to find out how far the various methods of tendering are being used, and whether there has been much movement away from open tendering since the publication of the Banwell report. Few private clients use open tendering and we therefore confined our inquiries to the public sector.

The following paragraphs (3.4 to 3.9) describe the situation that we found in each of the main sectors of public building work: housing, schools and universities, hospitals, central government contracts and nationalised industries.

Housing

3.4 Table 1 shows the proportion of schemes and dwellings let by various tendering methods in England and Wales over the period 1964 to 1966.

Housing is by far the largest single category of building in the public sector and the trend in methods of awarding contracts is therefore of special significance. The Ministry of Housing and Local Government issued a circular to local authorities in 1964 urging greater use of selective tendering. During the three year period there has been a sharp reduction in the use of open tendering. Nevertheless nearly 40 per cent of all housing schemes, mainly the smaller ones accounting for 20 per cent of dwellings, are still let by open tender. *We recommend that the Ministry of Housing and Local Government should issue a further circular to local authorities urging greater use of selective tendering, especially for smaller housing schemes.*

Table 1/Local Authority housing: method of appointing the contractor/percentages

Method of appointment	*Number of schemes*			*Number of dwellings*		
	June quarter			*June quarter*		
	1964	1965	1966	1964	1965	1966
Competitive (open)	49·2	43·2	39·3	31·4	28·6	20·2
Competitive (selective)	20·0	20·4	24·2	22·6	17·7	30·3
Negotiated*	23·3	27·8	27·4	29·0	40·7	35·2
Package deal	7·5	8·6	9·1	17·0	13·0	14·3
Total	100	100	100	100	100	100

* includes continuation contracts and some two-stage tendering.

Source: Ministry of Housing and Local Government

[1] *Report on the Placing and Management of Building Contracts*, 1944.

[2] In selective tendering, a client invites tenders from contractors who are selected for the purpose. A list may be drawn up with a particular contract in mind: this is called *ad hoc* or invited list procedure. Alternatively the client may have a standing list of approved contractors from which a short list is drawn for each contract.

[3] Negotiation of contracts can take several forms. One procedure is for the client to discuss the outline terms of the contract with a small number of contractors and then finally negotiate the job with a single contractor. Alternatively the contract may be negotiated direct with a single contractor without preliminary competition. A special form of negotiated contract is the '*package deal*' where the chosen firm (selected either by preliminary competition or direct negotiation) takes responsibility for the design and construction of the scheme from beginning to end.

[4] The two-stage procedure is used where it is desired that the contractor should join the design team at an early stage. The first stage consists of preliminary competition based on an outline in which the offers of selected firms are considered in the light of such factors as management and plant capacity, and the basis of their labour rates, prices and overheads. In the second stage the chosen contractor works as a member of the team while details are developed and bills of quantities drawn up and at the end of this time he submits a more detailed price which if satisfactory becomes the formal contract sum.

[5] Serial contracting is a form of standing offer whereby a contractor undertakes to enter into a series of separate lump sum contracts in accordance with the terms and conditions set out in the initial offer.

[6] Continuation contracts arise where it is desired to place a further contract or contracts based on the terms of an existing contract in order to obtain benefits which may arise from the continuity of work. Continuation contracts are therefore negotiated on the basis of the original contract.

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Schools

3.5 We carried out a sample survey, shown in Table 2 with the co-operation of the local authorities associations among English and Welsb boroughs and Scottish counties and burghs. (*Note:* This does not include Englisb and Welsh counties).

Table 2/Local Authority schools: method of appointing the contractor/percentages

Method of appointment	*Number of schemes*			*Value of schemes*		
	1963	1964	1965	1963	1964	1965
Open tender	22·1	22·4	26·2	31·0	20·5	13·0
Invited list	36·5	21·2	21·1	33·7	38·3	28·6
Select list	33·7	42·4	37·5	23·3	26·2	32·8
Negotiated contract	7·7	14·0	15·2	12·0	15·0	25·6
Total	100	100	100	100	100	100
Sample size (number/value)	389	344	389	£16·9m	£17·2m	£18·5m

Source: NEDO Survey.

The Department of Education and Science does not obtain information from local autborities about their methods of tendering but believe that the results of the survey may understate the amount of open tendering and overstate the amount of negotiation, particularly in 1965. The policy of the department is to urge local authorities to use selective and serial tendering and, where appropriate, negotiation. Tbe survey sbows that over the three-year period tbere has been a sharp reduction in the total value of schemes awarded by open tender, although the number of schemes has increased slightly, indicating that open tendering is still widely used for small schemes. The Banwell report urges that selective tendering is equally desirable for both large and small schemes. *We recommend that the Department of Education and Science should draw the attention of local education authorities to the need ta reduce the amount of open tendering on small school contracts.*

Universities

3.6 Contracts are let by the universities themselves but the approval of the University Grants Committee is required for all but the smallest works. Open tendering is not used except for very small contracts. The usual method of appointing the contractor is by selective tendering from a standing approved list but negotiation, often after a limited competition, is also used. For large contracts appointments by negotiation normally require tbe approval of the Department of Education and Science and in some cases of the Treasury. We think that undue caution may impede greater use of negotiation and other unorthodox forms of appointment. *We recommend that the Department of Education and Science and the University Grants Committee should be given greater freedom to approve appointment of contractors by unorthodox methods.*

Hospitals

3.7 The Ministry of Health could not provide detailed figures but it favours selective tendering and has recommended bospitals boards to obtain tenders from about six firms for most building contracts and fewer for the very small and very large jobs. Despite the advice of the Ministry of Health it is still common for as many as 10 or 12 firms to be invited to tender, especially for specialist heating, ventilating and electrical work. *We would urge the hospital boards to adhere more strictly to the size of select lists recommended by the Ministry of Health.* There is also a good deal of scope for greater use of experiment in negotiated contracts in a variety of forms. The cost of tendering for complicated hospital work is high and some large leading contractors are understandably reluctant to go to the expense when there is only a limited chance that they will get tbe job. All in all this field is very suitable for the unorthodox approaches which the Banwell committee advocated and about a quarter of bospital work is let in this way. The Ministry of Health is nevertheless anxious to make further progress. *We recommend that the hospital boards should be given greater discretion to increase the proportion of work let by unorthodox methods.*

Central government contracts

3.8 Most building contracts for central government are let by the Ministry of Public Building and Works. Open tendering is not used. The value of contracts for new work let in the United Kingdom and abroad in 1964 and 1965 was of the order of £120 million in eacb year and nearly all of this was let by selective tendering, the remainder being awarded by various forms of negotiation. The Home Office lets a small amount of building work, all by selective tendering based on standing approved lists.

Nationalised industries

3.9 We asked the British Railways Board, the Central Electricity Generating Board, the Gas Council and the National Coal Board how they let tbeir contracts. Open tendering is rarely used. Their work is specialised, the greater part being in civil engineering. Selective tendering and negotiation are usual.

Standing orders

Recommendation 3c: 'Impediments (to selective tendering) sbould be removed and rules for the conduct of selective tendering drawn up for the guidance of local authorities large and small.'

3.10 When the Banwell report was publisbed in March 1964, the standing orders of local authorities were based on a model issued in 1957 by the Ministry of Housing and Local Government. The model was

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biased in respect of contracts towards open tendering and this bias was no doubt partly due to the wording of section 266 of the Local Government Act 1933. When local authorities wished to use other methods of selection it was often necessary to suspend standing orders.

3.11 The Ministry of Housing and Local Government issued to local authorities in England and Wales new model standing orders facilitating selective tendering. The Scottish Office issued a circular to the same effect to local authorities in Scotland. The government departments concerned also prepared a handbook 'Selective Tendering for Local Authorities', in consultation with the local authorities associations. It was published by the Ministry of Public Building and Works in May 1965 and circulated to all local authorities.

3.12 There is now no impediment to the use of selective tendering by local authorities and they have had ample guidance on how it should be operated. However some local authorities have not yet altered their standing orders to correspond with the new model. *We recommend that the Ministry of Housing and Local Government should urge all local authorities, which have not already done so, to alter their standing orders in accordance with the new model.*

When to appoint

Recommendation 3d: 'The use of unorthodox methods where appropriate has advantages which should not be lost to members of the public sector through rigid adherence to outmoded procedures'.

3.13 In this recommendation the Banwell committee advocates the early appointment of the contractor before design and planning have been completed, so that he can work as part of the team in developing the details of the project and establishing its cost. Little has been done. Indeed, early selection is rarely employed other than in contracts negotiated from the outset with a single contractor. The Banwell report gives an illustration (para 3.14) of early selection in accordance with the recommended procedures for selective tendering. The main difficulty appears to be fear of breakdown of negotiations after a good deal of preliminary work. One safeguard is provided if the client sends a letter of intent to the contractor setting out the position. We believe that if this is done and if early selection has been careful and thorough, negotiations should seldom break down.

3.14 The Ministry of Public Building and Works is carrying out experiments on early selection. In 1966 the Ministry prepared and gave limited circulation to its 'Early Selection of Contractors and Serial Tendering' for the guidance of clients and their advisers. An inter-departmental government subcommittee on procurement policy is considering the possibility of making it easier for the Government to use unorthodox methods of contract.

3.15 Some hospital boards have introduced unorthodox forms of contract. For example, they use a procedure whereby a typical part of the work is fully designed and measured and tenders are invited on full bills for this part of the work and a weighted average bill for the remainder. The work is put out to tender on the understanding that the successful tenderer participates in the design work still to be done.

3.16 Clearly then some experiments are being made and this is encouraging. But unorthodox methods are still rarely used; nor will they be used so long as uninformed criticism of mistakes made by officials who risk innovation impels them to play safe. There is too little of the attitude that an occasional mistake is the price that has to be paid for progress.

Serial contracting

Recommendation 3e: 'The programming of work, carried out by means of serial tenders, offers great possibilities for continuity of employment, the development of experienced production teams, etc; and the banding together of those who have suitable work in prospect is to be encouraged.'

3.17 The Ministry of Public Building and Works has found it difficult to find programmes of projects meeting the essential requirements of serial contracting and in general serial contracting is still little used. Some large local authorities and some consortia of authorities use serial contracting for houses and schools and other authorities negotiate continuation contracts with a sitting contractor although they may not have contemplated this arrangement at the outset. This method is not true serial tendering but is one way of achieving the continuity which the Banwell committee advocated.

3.18 One reason why serial contracting is not more widely used is an incomplete understanding of the procedures and possible benefits. In addition only a minority of jobs meets the essential requirements of serial tendering. The Ministry of Public Building and Works' booklet 'Early Selection of Contractors and Serial Tendering', referred to earlier, describes the recommended procedures and conditions under which serial contracting is appropriate. *We firmly believe that there should be much more experiment by the professions, central government and local authorities in serial contracting. The Ministry booklet should be given wide circulation.*

Industrialisation

Recommendation 3f: 'Construction work must be enabled to benefit from standardisation and industrialisation'.

3.19 We have not discussed these subjects since they are being considered by the Economic Development Committee for Building in a wider context.

Negotiation

Recommendation 3g: 'Negotiated contracts need not be rigidly excluded in the public field; methods of contracting should be examined for the value of the solutions they offer to problems rather than their orthodoxy'.

3.20 We welcome negotiation as a method of appointment provided that it results in greater continuity of work or enables contractors to contribute to the design process. About half of local authority dwellings are now built under negotiated contract or package deal. For school and hospital building the proportion is about 25 per cent. It is important that an element of competition is retained when contracts are negotiated. Provided that this safeguard is operated *we believe that there is still scope for further use of this form of selection and recommend that central government departments continue to urge the use of negotiated contracts on local authorities, especially for larger schemes.*

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Future guidance by the Ministry of Public Building and Works on methods of selection should contain advice on procedures for negotiation.

Conclusions

3.21 In this chapter we have reviewed what is being done and what should be done to achieve the Banwell recommendations on appointing and selecting the contractor. We are encouraged by the trends we have found; nevertheless we think they should go further. We have made recommendations to this end, but there must be opportunities for new firms to prove themselves and show that they are suitable for inclusion on approved lists.

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4 Some notes on procedures

4.1 In this chapter the Banwell report discusses a number of points of good practice and lists some publications in which such practice is outlined. The committee comments: 'We wish they were more widely known and used' (para 4.1). We agree. There remains a wide gap between the practices of more forward looking and progressive clients and those who have still not adopted newer and more efficient methods.

4.2 Since publication of the Banwell report three further guides have been published and recommended practice is now set out in:

(i) 'Guide to Procedure for Building Project Management' published by the NJCC 1963.

(ii) 'Handbook of Architectural Practice and Management', particularly the section dealing with contract arrangements and tendering procedures, published by the RIBA, 1964.

(iii) 'Code of Procedure for Selective Tendering' (revised edition 1965) published by the NJCC

(iv) 'Selective Tendering for Local Authorities' published by the Ministry of Public Building and Works, 1965.

(v) 'Early Selection of Contractors and Serial Tendering' published by the Ministry of Public Building and Works, 1966.

4.3 We believe that all these documents should be more widely publicised and the practices contained in them more widely used. The use of these practices requires a more flexible approach towards the need to satisfy public accountability. This problem does not arise in the same form in the private sector. The documents listed above, and in particular numbers (iii), (iv) and (v), give guidance on how new procedures can be accommodated even in the public sector. *We urge the local authorities associations*[1], *the Ministry of Housing and Local Government and the Scottish Office to encourage local authorities to adopt the practices outlined in the guides on procedure.*

Standing approved lists

Recommendation 4a: 'The approved list should be compiled following public advertisement and contractors not included in it should be invited at intervals to apply. The conditions of entry should not be such as to discourage admission of new growing firms. Unsatisfactory firms should be removed from the list.'

4.4 Recommended procedure for selective tendering is dealt with in the MPBW handbook 'Selective Tendering for Local Authorities'. The Ministry of Housing and Local Government issued a circular in May 1965 to all local authorities commending the handbook. We believe that it is a weakness of the handbook that it does not indicate the number of contractors who should be invited to tender. It is not uncommon for local authorities to invite 15 or more contractors to tender. The Robertson committee[2] suggested in 1954 that the number of tenders for each contract should lie between 4 and 12. Although there is no single number which is right for each and every type of contract, we believe that 12 is too many.

4.5 We asked a sample of local authorities whether they regularly reviewed the names of contractors on their approved lists. It is important that good contractors should be added to the list and that those whose performance is poor should be deleted. It appears that such reviews do not take place as regularly as they should and that there is undue reluctance to remove firms whose performance has been disappointing. We attach great importance to strict adherence to this procedure which lies at the heart of selective tendering.

4.6 There has been progress in this important area since the publication of the Banwell report but more could be done. In particular *we recommend that the Ministry of Public Building and Works should urgently revise its booklet 'Selective Tendering for Local Authorities' to include guidance on the size of select lists; the Ministry of Housing and Local Government should strongly press its use on local authorities, particularly because of the guidance it gives on the regular review of lists.*

Ad hoc approved lists

Recommendation 4b: 'Where no formal approved list is maintained, selection can be achieved by means of advertisement of the intention to invite tenders, the short list being chosen from among those applying for permission to tender.'

4.7 Many authorities still make widespread use of this form of selective tendering. We believe that the Banwell committee had in mind that standing approved lists should be used as a general rule and that invited or ad hoc lists should be used mainly when the work was of a specialist or non-repetitive nature. *We recommend that the Ministry of Housing and Local Government and the local authorities associations should draw the attention of local authorities to the desirability of employing standing approved lists, or ad hoc list procedure where appropriate.*

Tendering period

Recommendation 4c: 'The period allowed for the submission of tenders must be adequate for the type of project concerned.'

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[1]Association of County Councils in Scotland
Association of Municipal Corporations
Convention of Royal Burghs of Scotland
County Councils' Association
Rural District Councils' Association
Urban District Councils' Association

[2]*Report of the Joint Committee on Tendering Procedure*, published March 1954 by the Joint Committee of the RIBA, RICS and NFBTE.

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4.8 The National Federation of Building Trades Employers consulted a small sample of its members on our behalf to find out whether adequate time is now provided for the submission of tenders. Most but by no means all the firms consulted agreed that there had been an improvement in the last two years, particularly in the public sector, and that on the whole adequate time was given. *Main offenders with regard to the provision of an adequate tender period are in the private sector and we therefore recommend that the* RIBA and RICS *continue to draw the attention of their members to this particular Banwell requirement.*

Alternative offers

Recommendation 4d: 'The submission of a feasible alternative scheme by a tenderer should not be ruled out simply on the ground that to permit such an offer would cut across the principle of parity of tendering.'

4.9 This particular recommendation did not receive universal support at the time of publication of the Banwell report, and alternative schemes are still largely discouraged. The submission of alternative tenders is not usual practice in the building industry. They are more frequently submitted for certain specialist types of work, such as piling, structural framework and mechanical services. This recommendation is important because it is a practical example of the Banwell committee's major recommendation about the need to bring design and construction more closely together.

4.10 We consider that if a contractor wishes to put in a tender based on an alternative method of construction he should not be discouraged from doing so. However the traditional principle of parity of tendering makes it in practice difficult for clients in the public sector to accept tenders on alternative designs even when they appear to provide better value for money. For this reason we think it may be necessary to require an alternative tender to be accompanied with one on the original specification. Without a clear lead the use of alternative tenders will not develop and *we therefore recommend that the Ministry of Public Building and Works should consider providing guidance for clients in the public sector on how to treat tenders based on alternative methods of construction.*

Notification of results

Recommendation 4e: 'The results of competitions should be notified promptly. Once the contract has been let all tenderers should receive lists of the firms submitting tenders and of prices submitted.'

4.11 There are three separate points in this recommendation. First, tenderers should be notified promptly whether or not they are successful. Second, tenderers should be given a list of those firms who have tendered. Third, tenderers should be notified of the prices submitted, but not necessarily with the names of the contractors who submitted them.

4.12 Although these practices have all been supported by the NJCC they are not in common use. The NFBTE's sample enquiry showed that although all the firms consulted received notification of whether or not they had been successful in the competition, notification was rarely prompt. One cause of delay is the possibility of errors in tenders, for by the time errors are corrected the ranking may be altered. However, if the lowest three tenders are kept open there should be sufficient safeguard that the successful tender will still come from this group. *Accordingly we recommend that the lowest three firms in a competition should be notified within seven days that they are in the running and that the other firms should be notified just as quickly that they are not. The Ministry of Housing and Local Government should urge local authorities to adopt procedures, including delegation to officials, to enable this to be done.*

4.13 Despite the recommendation in the Banwell report it is still unusual for results of competitions to be circulated, even where lists of prices and contractors are separate. It is frequently suggested that such information will encourage the formation of price rings and collusion. We believe that such fears are best allayed by publication of lists, not by secrecy.

4.14 The Greater London Council normally writes to each tendering firm within a matter of days with a list of contractors in descending order of tender. Those above the lowest three are immediately released from their obligations. The Ministry of Public Building and Works adopts a similar policy. As soon as tenders are opened it writes to all but the first three saying that their offers are declined. The second and third lowest are advised that subject to scrutiny of the last three tenders their own tenders are likely to be declined, while the lowest tenderer is asked to submit a priced bill, and by implication informed that his offer is likely to be accepted. After a tender has been accepted a list of prices and names is circulated to each tenderer, although names and prices cannot be associated.

4.15 Common practice is still far different from what the Banwell report recommends, from what the NJCC endorses and from what leading national clients are now doing. *We recommend therefore that the Ministry of Housing and Local Government should bring to the attention of local authorities what is desirable practice with regard to the circulation of results of competitions; that the* RIBA *and* RICS *should make it clear to their members that these practices should be generally adopted; and that the Ministry of Public Building and Works should draw the attention of government departments and other public bodies to the practices which are desirable.*

Submission of priced bills

Recommendation 4e: 'All tenders should be accompanied by priced bills of quantities.'

4.16 This recommendation was unwelcome to the industry at the time of the report and was one of the few Banwell recommendations not accepted by the Government. We believe that the requirement that all tenders should be accompanied by priced bills of quantities would lead to needless extra clerical work. Contractors' working documents would have to be put in a form suitable for scrutiny and extra copies made. It is important nevertheless that the priced bill of the main contractor who submits the lowest tender should be available quickly so that scrutiny can take place without delay. *We consider that the quantity surveyor should be able to insist that the main contractor with the lowest tender should submit his priced bill within two working days of its being asked for unless there are exceptional circumstances. The* NJCC *should draw up a code or practice to bring this about.*

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Pre-planning

Recommendation 4f: 'Adequate time must be allowed between appointment of a contractor and the commencement of work on site.'

4.17 From the enquiry conducted by the NFBTE it is clear that the majority of firms consider that adequate time is generally allowed between appointment and commencement of work on site. However, local authorities who may be anxious to begin work before the end of the financial year, partly because they may be unable to carry forward approvals from the financial year to the next, do not always allow sufficient time for the contractor to plan his work. Our recommendation on financing forward programmes in para 4.19 should assist.

Public authorities and forward budgeting

Recommendation 4g: 'Where public funds are concerned, approval to proceed should be given at the earliest possible stage, and reference back to government departments should not be required except where estimates are exceeded by a given percentage. Similarly, funds for public projects must be made available on the basis of a programme over a period of years.'

4.18 The NFBTE survey shows that there is still much delay and that there has been little improvement since publication of the Banwell report. There would be some improvement if it were to become normal practice for local authorities to consult the Ministry of Housing and Local Government at sketch plan stage to ensure that cost indications lay within the approved budgets. This alone will not avoid delays at the final approval stage if the costs rise in the meantime and local authorities must ensure that there is no escalation of costs between the sketch plan and detailed drawing stages. This implies careful cost control throughout the design stage. *Where an authority has reason to believe that the final cost of a scheme is likely to exceed the agreed budget, the scheme should be further discussed with the Ministry of Housing and Local Government or department concerned. Schemes which are likely to cost more than the budget should not be put out to tender because such practice merely leads to delays.*

4.19 The Banwell recommendation that funds be made available to an agreed programme of works over a period of years had been partially implemented. Many government departments and local and public authorities now have programmes of work and budget estimates for several years ahead. Generally there is no problem in financing works already started and which extend over a number of years but if there is slippage in the programme, schemes not yet started may have to find a new place in the queue, for there exists no automatic transfer of funds from one year to the next. Because there is no automatic roll-forward of programmes there is often a rush to complete design work, invite tenders, place contracts and to start work on site before the end of a financial year. Such haste leads to mistakes and shoddy work. A contributory factor is that preliminary design and costing work is sometimes not allowed to go ahead unless there is financial approval for the whole scheme. We are not advocating triennial or quinquennial accounting, which would only result in a similar scramble every third or fifth year. What we would like to see are rolling programmes of work for several years ahead. The greater part of such programmes should be firm with only a small balance provisional to provide the Government with the necessary flexibility in management of the economy. *We think that the National Economic Development Council should give attention to the need for greater financial commitment to be attached to forward programmes of work in the public sector.*

Building regulations

Recommendation 4h: 'A single comprehensive code covering all the standards relating to the construction of buildings over the whole country is required, and the necessary legislation should be introduced.'

4.20 Building Regulations for England and Wales, though excluding inner London, have now been made under the Public Health Act of 1961. These came into force on 1 February 1966 and replaced the former local authority building bye-laws, which differed from authority to authority.

4.21 The Banwell committee welcomed the idea of national building regulations which were being prepared at the time the committee was sitting. The report mentioned their limitations: they would relate only to those matters which were covered by existing bye-laws; they would not refer to electrical and water installations or to the means of escape in case of fire; they would not be comprehensive—a number of related matters would remain within other regulations and Acts of Parliament and would continue to be administered by different authorities from those responsible for the administration of the building regulations. There would be only limited standardisation over the country as a whole and many of the matters essential to design and construction would remain separately provided for. There is therefore no single comprehenisve code.

4.22 The Banwell committee also considered that whatever code was decided upon should apply to the whole of Great Britain (para 4.23). There is still a long way to go. The National Building Regulations apply to England and Wales only. Moreover they do not apply to the inner London boroughs[1] of the Greater London Council. To negotiate a single comprehensive code is a major task especially as building regulations introduced in England and Wales last year differ from those introduced in Scotland as recently as June 1964.

4.23 In our discussion of this subject we have noted another problem: where the regulations are in force there is some lack of clarity and confusion because different inspectors give different interpretations.

4.24 *There are therefore three aspects in which control by the Building Regulations needs to be improved: in the scope, geographical coverage and in consistency of interpretation. Improvement will almost certainly have to take place in stages. As a first step the existing Building Regulations should be made more comprehensive in scope. Enabling legislation to bring this about should be introduced as soon as possible.*

[1]The former London County Council area.

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5 Conditions of contract

5.1 There are three main forms of contract which are widely used in the construction industry. They are:

(i) the 'RIBA form' which is used for building work;

(ii) the 'ICE form' which is used for civil engineering work;

(iii) CCC/Wks/1 form which is used for government work in both building and some civil engineering.

A single form of building

5.2 The Banwell committee's opinion was that a common form of contract for all construction work, that is, one form for both building and civil engineering, is both 'desirable and practicable'. As a first step the committee recommended that there should be one form for building and another for civil engineering. To this end a working group of a government inter-departmental sub-committee on procurement policy has been examining the RIBA form to see whether it is possible to produce a version suitable for government use on building work, whilst still preserving the client interest of the present government form. The working group has not yet completed its work. *We consider that the adoption by the Government of the* RIBA *form (with any essential modifications for government use) is a crucial step towards more standardised contract conditions for building. Work in hand on this matter should be pressed to completion as soon as possible.*

5.3 The recommendation in para 11.5a of the Banwell report that 'special requirements of Scottish law ... should be met by agreed additions or alternatives rather than by separate sets of contracts' has been implemented. The 1963 RIBA form of contract has now been issued in Scotland, amended as necessary to meet the requirements of Scots law and building practice in that country. Similarly, special versions of sub-contract (suitable for either nominated or non-nominated sub-contractors, and based on the 'green' form) have been introduced in Scotland.

5.4 There is therefore some progress towards a single form of contract for building. Nevertheless, despite the existence of a standard variant of the RIBA form for local authority work, certain local authorities still use their own individual variations. This is detrimental to the efficient working of the industry, for the reasons given in the Banwell report. Furthermore, insofar as all the local authorities associations are fully represented on the Joint Contracts Tribunal, it should be possible for their requirements to be met by the standard local authority version. *We recommend that the Ministry of Housing and Local Government and the local authorities associations should press for the widest use of standard forms of contract where these already exist and do all they can to discourage individual amendments.*

A common form for building and civil engineering

5.5 The second stage of the Banwell committee's recommendation was that, once there is a standard form for all building work and one for civil engineering these should be brought together in a common form for all constructional work. We have discussed this proposition fully. Strong arguments have been put forward by the organisations representing contractors and professions against the possibility of a common form of contract on the following main grounds:

(i) The ICE Conditions of Contract form the basis of the International Form of Contract which is becoming increasingly adopted for use by contractors who carry out construction work in countries other than their own. This puts United Kingdom contractors and designers in a good position for getting overseas business which abolition of the ICE conditions would weaken.

(ii) The ICE conditions are concerned with work which is to be the subject of re-measurement whereas the RIBA conditions do not envisage re-measurement.

5.6 In January 1966 the Joint Contracts Tribunal, which is responsible for preparing and publishing the RIBA form of contract for building work, and the Joint Contracts Committee, which is responsible for preparing and publishing the ICE Conditions of Contract for civil engineering work, met to discuss the Banwell committee's recommendation that there should be a joint contract for all construction work. Their view, which is also the view of the constituent bodies, was that there should be a single standard form of contract for civil engineering work and a single standard form for building, but that the amalgamation of the two was a doctrinaire objective, the achievement of which would not produce any marked reward and could cause a great deal of difficulty.

5.7 We are not persuaded that the Banwell committee's recommendation should be wholly abandoned. We think that, although the problem of measurement would cause drafting difficulties it is by no means an overriding objection; even now, each form of contract can be modified to suit the method of measurement used in the other industry. Again, many building jobs contain a proportion of work which is essentially civil engineering; and vice versa. Where a contract is particularly large and when there is a good deal of both building and civil engineering work, two separate contracts are sometimes used, one for building and the other for civil engineering. And in other cases, the whole of the project is carried out under one contract with the result that a good deal of the work is done under inappropriate contract conditions. The problems are aggravated at the sub-contract level and sub-contractors believe that there would be advantages from the introduction of a single form. Complications can arise for example when a sub-contractor is

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called in to do some building work within a civil engineering main contract.

5.8 Although a common form is in principle desirable, there are considerable difficulties and we have noted the strong opposition from the two contract bodies. Moreover there are many differences in working practice between building and civil engineering. Contract conditions should reflect current practice and a common form will not be workable until practices are more uniform. We do not therefore expect progress to be quick but it is important that minds should not be closed to the eventual possibility of a single form. The first step is clearly to have one form for building and one for civil engineering. Only when this has been achieved should attention be given to a common form; but meanwhile the RIBA and ICE forms should be harmonised wherever possible. *We recommend therefore that the Ministry of Public Building and Works should study in consultation with all interests how far clauses of identical effect can be written in common language.*

Sub-contracts

5.9 The Banwell committee recommended that the standardisation of sub-contract conditions should follow that of main contract conditions. There are three[1] principal forms of sub-contract. These forms however are not in universal use: many main contractors have drawn up their own forms of sub-contract and the majority of these have the interests of the main contractor primarily in mind. The Banwell committee deplored the existence of these forms and so do we.

5.10 There exists as yet no standard form for nominated sub-contractors which is universally acceptable. The Joint Contracts Tribunal has recently started work on a standard form for nominated sub-contractors. There are however no plans at this moment to produce a standard form for non-nominated sub-contractors. It is as important to have a standard form for non-nominated sub-contractors as it is for those who are nominated. *We recommend that the JCT should give early attention to the production of a standard form for non-nominated sub-contracts in order that both forms of sub-contract tie in with the RIBA main form and there is consistency throughout.*

Private works

5.11 The Banwell committee also recommended that there should be standard conditions for small private works, generally where no architect is involved, laying down the rights of and conditions accepted by both sides. Many associations have produced conditions on which private works can be carried out and four years ago the National Federation of Building Trades Employers prepared Model Conditions of Estimate incorporating a number of recommended trading conditions. When the form is signed the quotation becomes a contract between builder and client. The conditions were not prepared in consultation with bodies representing clients and we think this should be remedied. *We recommend that the NFBTE should invite a body representing consumer interests, such as the Consumer Council, to endorse the form with the objective of extending its use.*

Restrictive Trade Practices Act

5.12 The Restrictive Trade Practices Act, 1956, stands in the way of the promotion by bodies representing commercial interests of standard forms of contract. The Restrictive Trade Practices Court has ruled that the requirement by the Birmingham Federation of Building Trades Employers that its members press for the use of a standard form of contract was a restrictive practice and against the public interest. The Act, as interpreted in this judgment of the court, means that organisations representing commercial interests, such as contractor and sub-contractor trade associations, are prevented from recommending the use of standard forms of main contract and sub-contract by their members. Nor may they take any action that might be regarded by the court as being a recommendation of a standard form. It is however in order for professional bodies, or for the Joint Contracts Tribunal, for instance, to recommend the general use of a standard form. The problem of encouraging the use of standard forms of sub-contract is particularly acute because architects, who are not affected by the court's ruling, are not parties to sub-contracts.

5.13 We have had discussions with the Board of Trade to see what progress could be made without contravening the Restrictive Trade Practices Act. Three possibilities have been put forward:

(i) that the NFBTE should ask the Registrar for guidance on whether, in the light of the Banwell report and changing conditions within the building industry, an application to vary the terms of the undertakings given to the court following the Birmingham case would be given favourable consideration;

(ii) that section 12 of the 1956 Act be invoked with a view to striking the agreement off the register as being of no substantial economic significance;

(iii) that other means of promoting standard forms should be used which would not constitute a breach of the undertakings given to the court, *eg* endorsement by Ministries concerned.

None of these approaches seems to us to be wholly satisfactory and we believe the only solution lies in amendment to the 1956 Act.

5.14 Representations have recently been made to the Government by the National Economic Development Council (including the views of this working party) and the Confederation of British Industry on the effect of the Act in preventing certain agreements to promote standardisation and rationalisation which would be to the benefit of the economy as a whole. The President of the Board of Trade has since announced that he intends to introduce amending legislation and 'to grant temporary exemption from registration under the 1956 (Restrictive Trade Practices) Act of agreements which can be shown to be positively beneficial to the national economy' (*Hansard* 28 Feb. 1967). We welcome this statement. The Board of Trade is aware of the problem and of the need for promoting standard forms of contract and it is important that any amending legislation introduced should make it possible for there to be unimpeded advocacy of standard forms of contract.

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[1](i) The 'green' form for nominated sub-contracts, used in conjunction with the 1963 RIBA main form. This was drawn up in 1963 by the NFBTE and FASS and approved by CASEC.

(ii) The 'buff' form for nominated sub-contracts (where the 1963 RIBA main form is not used) and non-nominated sub-contracts. This was drawn up in 1950 by the NFBTE and FASS.

(iii) The 'blue' form for non-nominated sub-contracts. This was drawn up in 1956 by the NFBTE and approved by the National Federation of Plastering Contractors.

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6 Bills of quantities

6.1 Chapter 6 of the Banwell report deals not only with bills of quantities; it also discusses the role of the quantity surveyor. We did not embark on consideration of this wider issue which would have brought us to an examination of the roles of the other parties in the building team. We consider these matters to be outside our terms of reference. The Banwell recommendtions in this chapter are a good deal less definite than elsewhere. The only specific recommendation is that bills of quantities should be simplified, but that significant improvements are likely to spring mainly from the provision of really adequate supporting information in the form of drawings and specifications by the architect at the time of tender.

Simplification of bills

6.2 The RICS commissioned a research project in 1964 to look into the possibility of rationalisation of measurement for building and a study[1] has just been published. The problem is more complicated than was originally thought and the RICS is arranging for the work to be followed up. The ultimate aim of this further research is to design documents which are both simpler and more informative than the present ones. The RICS has recommended quantity surveyors to use the Fletcher-Moore system of standard phraseology in bills of quantities. The institution has also appointed a steering group on the use of computers in quantity surveying work.

Cost analysis

6.3 The Banwell report referred to the importance of extracting all possible information from bills of quantities for cost planning and analysis. Since 1962 the RICS have been running a Building Cost Information Service to which 700 quantity surveyors now subscribe. As part of this service quantity surveyors provide information on cost elements from bills, with the permission of clients and contractors. This information is collated by the RICS and fed back to subscribers. The Heating and Ventilating Contractors' Association hopes to esatblish a similar service in the specialist field of mechanical services. The RICS scheme is less useful than it might otherwise be because some central government departments and local authorities refuse to allow cost information obtained on contracts awarded by their departments to be used in this way. *It is essential that the Building Cost Information Service is drawn from as wide a sample as possible and we recommend that those public authorities which have so far refused to make information available should reconsider their decisions.*

6.4 What is required is an understanding of the main determinants of cost in order to establish the effect of design on cost. There are many difficulties in getting at the true relationship. First the measurement and make up of bills do not always reflect the cost of operations. For example to show clearly the effect of repetition, some items in the bill ought to be separated out and others grouped together. A move towards operational bills, which the Building Research Station is currently examining, may help. Second, there is no uniform treatment of preliminary items (welfare arrangements, temporary site buildings, items of large plant, *etc*) in the bill of quantities. Third, there are so many random items, for example weather conditions, which can influence the cost between one job and another even where construction appears to be similar. Clearly there can never be perfect knowledge about the various cost elements in the building process but we believe nevertheless that better information can be obtained and that it is worth seeking. *We recommend that the* RICS and NFBTE *should consider commissioning research on how to obtain better cost feedback for estimating, so that bills of quantities and tendering documents can better reflect the estimator's true requirements, and eventually provide a clearer understanding by the quantity surveyor, designer and contractor of the major determinants of cost. In addition, the* NFBTE *and* RICS *should jointly examine whether headway can be made on greater uniformity in the presentation and pricing of preliminaries.*

Training of quantity surveyors

6.5 The Banwell report envisaged a more imaginative and creative role for the quantity surveyor than that to which he has been traditionally accustomed in many practices. With increasing industrialisation of building and greater use of factory-made components, the quantity surveyor will need to become more familiar with the principles of industrial cost accounting. The RICS is aware of the need for change and has recently raised the educational requirements for entry to the profession.

6.6 The RICS is also encouraging full-time education for new entrants, rather than reliance on the traditional method of being articled in an office. Continuation training for the existing members of the profession is also important because of the development of new techniques. Short residential courses and one-day conferences are available for qualified quantity surveyors. They are generally well attended, but the expansion of advanced training is limited by the shortage of teachers and speakers. A post-qualification college, which we recommend in para 2.13 for the industry as a whole, could help.

6.7 In sum there is some useful work in hand. *However, sponsorship of cost research projects is expensive and it is important that progress is not delayed by shortage of money. If necessary the Government should help.*

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[1] *Rationalisation of Measurement* by L G Holes and D J O Ferry, published April 1967 by the RICS. (price 10s.)

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7 Sub-contractors

7.1 Chapter 7 of the committee's report is essentially a Banwell report in miniature. If anything, the problems of inter-relationships are more complex at the sub-contracting stage because the sub-contractors are an additional link in the chain.

Representation of sub-contractors

7.2 In the introductory paragraphs to this chapter the Banwell committee repeats its main theme, that 'building (is) the product of a team rather than of a number of individuals or firms working without cohesion' (para 7.2).

7.3 The relationship between the sub-contracting interests and the other members of the building team is, at the national level, less harmonious than it should be, due partly to the fact that hitherto organisations representing sub-contractors have not been members of national bodies on which other members of the building team are represented. We have made recommendations about this in Chapter 1. While representation of sub-contractors' organisations is an essential ingredient of greater harmony within the industry, it cannot of itself produce cohesion on site between the main contractor and sub-contractor. What it can produce are favourable conditions for co-operation at national level, and in particular for the drawing up of a set of standard contract documents for use throughout the industry.

Nominated and non-nominated status

7.4 A nominated sub-contractor is chosen by the architect or designer, usually after competition on a selective basis, whereas a non-nominated sub-contractor is invited to tender for work by the main contractor himself. Nomination is essentially a matter of selection and is employed in the interests of the client for the reasons outlined in the Banwell report (para 7.4). Where a sub-contractor is nominated it is less likely that his price will be forced down by setting it off against the price of another sub-contractor (dutch auctioning) at the tender or post-tender stages.

7.5 The sub-contractor, whether nominated or non-nominated, enters into a contractual relationship with the main contractor. However, the forms of contract used and the rights of sub-contractors are different for nominated and non-nominated sub-contractors. A nominated sub-contractor is often unaware at the time of his selection who the main contractor will be. By the time the main contractor is appointed it may be difficult to withdraw should he wish to without the loss of goodwill. On the other hand a non-nominated sub-contractor is approached by the main contractor himself and will exercise his own commercial judgment as to whether to enter into a contractual relationship with the main contractor. This difference is reflected in the RIBA form of contract which provides stronger protection in regard to payment for the nominated sub-contractor. This can lead to a desire on the part of sub-contractors to be nominated to obtain these contractual benefits. We believe that it should be a matter of commercial indifference to the sub-contractor whether he is nominated or not. Furthermore architects and designers should not come under pressure from sub-contractors seeking nominated status. What there must be is appropriate protection for each class to enable them to operate on terms fair to all parties. To achieve this some improvement in the contractual protection for non-nominated sub-contractors is desirable. *We have recommended in para 5.10 that the* JCT *should prepare a standard form of contract for non-nominated sub-contractors. When doing so it should bear in mind the need to provide appropriate protection on the lines that we discuss.*

Payments

7.6 Clause 25 of the RIBA form of contract provides protection for the client in the event of default by the main contractor in the performance of his contract under a number of circumstances, including his bankruptcy. It offers incidental protection to both nominated and non-nominated sub-contractors. The consequence of default of the main contractor is his dismissal (though he may by a decision of the architect be reinstated). If he is not reinstated, the client may pay the sub-contractors direct for any work they have done as part of the contract, whether before or after the default.

7.7 In practice the application of this clause in the case of default by bankruptcy gives rise to considerable difficulty. Clause 25 is not mandatory on the client and his architect and because there is considerable argument about its legal effect there is a degree of uncertainty which makes clients reluctant to use it in these circumstances. Uncertainty on this point particularly influences local authorities; they may want to make payments due to sub-contractors so that work can continue, but are inhibited from doing so because of fears of involving themselves in a double payment. The difficulty will not be finally resolved until the clause has been tested in the courts.

7.8 Clause 27c of the RIAA form of contract provides nominated sub-contractors with additional and much better protection against default by the main contractor, including bankruptcy. Under this clause the architect has a contractual right to ask at his discretion for proof from the main contractor that nominated sub-contractors have been paid the amounts due to them. If they have not been paid the architect informs the client who may then, at his discretion, pay the sub-contractor direct, at the same time deducting a similar amount from sums owing to the main contractor. In para 9.4 where we

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are considering money flows generally we make a recommendation on this point which should help.

7.9 Problems arising from bankruptcy of main contractors occur with sufficient frequency for this to be a matter of real concern to sub-contractors. Furthermore there are obscurities and complextities relating to what the parties to the contract are legally required to do and also as to what is good practice. The JCT is currently considering the position under clause 25 when a main contractor is in financial difficulties. *We recommend that the* JCT *should consider issuing a practice note on the subject of default to ensure that all the parties to a contract are fully aware of their rights and responsibilities.*

Tendering procedure

7.10 The Banwell report urges that 'main contractors should apply to the selection of (non-nominated) sub-contractors the same standards of fairness which they expect when they themselves are chosen'. (para 11.7d). We have discussed an aspect of the problem in para 7.4. Standardisation of the procedure for inviting tenders would help. *There is no standard form of estimate for non-nominated sub-contractors. We think there should be and that the* NFBTE, FASS and CASEC *should jointly prepare one.*

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8 Firm price contracts

8.1 The Banwell report states that firm price contracts are 'healthy'. We agree they have benefits: they encourage careful pre-planning, they impose a cost discipline on contractors and they cut out unproductive work in dealing with fluctuations.

8.2 We are not however wholly persuaded that the use of firm price contracts results in lower tender prices. They require the contractor to gamble on future cost increases over which he has little or no control. He has now also to take a view of future changes in taxation rates and types, *eg* selective employment tax. This particular difficulty could be overcome if firm price contracts were firm only in respect of normal commercial risks.

8.3 On balance, however, and mainly because we believe that firm price contracts lead to better pre-planning, we support their increased use.

8.4 Firm price contracts are becoming increasingly popular amongst private clients and the RIBA should support this trend. Government departments use firm price contracts widely, but the use of fluctuation clauses by local government is rather more common. *We recommend that the Ministry of Housing and Local Government should urge local authorities to make even greater use of firm price contracts.*

Pre-planning

8.5 The Banwell report stressed that before firm price quotations were sought, schemes should be settled in their critical details (para 8.3). This requirement is essential for the successful operation of firm price contracts. Contractors are frequently invited to tender on incomplete documentation and more detailed documents may be available only several months later, because clients have not settled points of detail at the tender stage. Contractors should insist that the carcase of a contract is fully detailed at tender stage. Government departments on the whole adhere to these principles and do not go out to tender on a firm price contract until documentation is complete. But local authorities do not always observe the requirements of early settlement of details, partly perhaps because of the pressures to get tenders out before a certain date. We have discussed some of the wider effects of this in para 4.19.

Contract period

8.6 The Banwell committee suggested that two years was not an excessive period for firm price, fixed period, contracts (para. 8.4). The present two-year limit for public sector contracts seems to us to work reasonably well and is operated with some flexibility. There could however be disadvantages in setting too rigid a limit. Periods longer or shorter than two years may be appropriate in the light of the incidence and duration of major wage agreements. There is some lack of clarity as to the date from which the firm price period is measured. We believe that it should run from the date the tender is accepted and not from the date on which work is started.

Time limit for acceptance

8.7 The Banwell report also recommended that the period during which tenders remain open should be limited and clearly stated. This recommendation is particularly important where the tender is being invited on a firm price basis. Tender documents do not in general specify a particular time limit for accepting tenders. Government departments have standing orders to ensure prompt acceptance but local authorities are sometimes slow in accepting tenders. We have made a recommendation in para. 4.12 that unsuccessful tenderers should be notified promptly and a further recommendation in para. 4.16 that the lowest tenderer should submit priced bills quickly. This should help. *We also recommend that the Ministry of Public Building and Works should consider giving a time limit for acceptance in the tender documents for government work. If this is done the Ministry of Housing and Local Government should urge local authorities to adopt a similar procedure.*

Materials

8.8 The Banwell committee also recommended that the nationalised industries, merchants and materials manufacturers should quote firm prices for delivery within a reasonable period. While firm prices for materials are quoted in some circumstances, the materials producers believe that firm prices can result in higher prices being paid over the period of the contract. The National Council of Building Materials Producers has said that it is not in a position to recommend its members to quote firm prices. There are a number of factors which work against quoting on a firm price basis for forward delivery: the nationalised industries which are suppliers to the materials producers will not quote on a similar basis; contractors may cancel orders for materials if current market prices fall and then buy elsewhere; prices of certain key imported raw materials, such as copper, timber and asbestos fibre, have in the past fluctuated widely. In addition many manufacturers' organisations are not prepared to make recommendations on pricing practice to their members and run the risk of contravening the Restrictive Trade Practices Act. *We recommend that the Construction Materials Group of the Economic Development Committee for Building should look into the question of firm prices for materials.*

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9 Payments, retentions and incentives

9.1 The recommendations in this chapter support many of the underlying themes of the Banwell report: the emphasis on selective tendering; greater confidence between the members of the building team; scrupulous interpretation of contract conditions; and the elimination of unnecessary controls, particularly on the part of public authorities. The recommendations relate mainly to the improvement in money flows between the various parties to the building contract. Inadequate or restricted money flows are a prime cause of bad relationships. Furthermore, the industry has a chronic shortage of liquidity and an adequate and regular flow of money is therefore vital. We attach great importance to the implementation of the recommendations in this chapter.

Improving the money flow

9.2 The Banwell committee found that progress payments were sometimes late and that delays were commonly passed on to the sub-contractors. The committee made three important suggestions (in para. 9.5) which in our opinion have been overlooked. These suggestions can be summarised as follows:

(i) The client's representative should establish for each period the date of certification which suits the client best and should arrange for all procedures leading to periodical certification of accounts to be related to that date. The period for honouring certificates should never exceed 14 days. Contractors as a matter of common practice should, when appointed, prepare forecasts of the probable rate of expenditure.

(ii) Where a limited number of items is in dispute in a certificate, payment of the undisputed items should take place at once.

(iii) detailed valuations need be made less frequently. Periodic payments should be made on approximate assessments which can be adjusted by exact valuation at quarterly intervals.

We recommend that the RIBA *and* RICS *(for contracts in the private sector), the Ministry of Housing and Local Government and the local authorities associations (for contracts undertaken by the local authorities), and the Ministry of Public Building and Works (for contracts undertaken by government departments and other public authorities) should immediately and strongly urge the widespread adoption of these practices.*

9.3 On final accounts sub-contractors complain that 'pay when paid' is still common, particularly when there are delays over settlement. Insofar as the sub-contractor's contract is directly with the main contractor, the sub-contractor should be paid when he is entitled to payment irrespective of whether the main contractor has himself been paid. Part of the problem, especially for non-nominated sub-contractors, may arise because there is no generally accepted standard form of sub-contract and the procedure varies according to which form is used.

9.4 On interim payments the problem is aggravated because the RIAA form of contract requires the main contractor to pay the nominated sub-contractor within fourteen days of receipt by the contractor of the architect's certificate, whereas there is no such fixed time limit for the main contractor to be paid by the client, the limit being a matter for negotiation and sometimes extending beyond fourteen days. The real problem at the interim stage is not however 'pay when paid' but the fact that some main contractors fall progressively behind in their payments to sub-contractors. Clause 27c of the RIBA form entitles an architect to require reasonable proof from the main contractor that he has discharged amounts due to nominated sub-contractors before issuing the next certificate. While this clause confers a right on the architect, it is not a contractual requirement. Moreover it is not practised widely, particularly in the private sector. *We recommend therefore that the* JCT *should consider making clause 27c of the* RIBA *form a contractual requirement on the architect. At the same time nominated sub-contractors should be required to provide receipts for payments made.* In addition there is a contractual requirement in the RIBA form (clause 27b) that architects notify nominated sub-contractors of amounts included for them in certificates issued to the main contractor. This practice is not as widespread as it should be and *we recommend that the* RIBA *should continue to remind its members of their obligations under clause 27b of the* RIBA *form.*

9.5 At present non-nominated sub-contractors can best safeguard their position in the event of default by the main contractor by ensuring that payments from the main contractor are kept up to date. We have commented on the need to provide non-nominated sub-contractors with appropriate safeguards in para 7.5.

9.6 There is no similar contractual obligation under CCC/Wks/1. The Ministry of Public Building and Works has recently issued instructions to the effect that, although there is no contractual obligation, a nominated sub-contractor, if he asks, should be told when certificates have been issued to the main contractor. We welcome this instruction but think that a better approach is to make this practice a contractual requirement.

Public authorities

9.7 The Banwell committee recommended that public authorities and other large organisations should not permit payments due under the terms of their contracts to be delayed by administrative procedures. The administrative procedures of some

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local authorities and some hospital boards still remain cumbersome despite the Banwell committee's recommendations. It has been known for public authorities before payment of final accounts to employ two quantity surveyors, one to check the other, then for the accounts to be passed on to an auditor who in turn passes them over to the treasurer for final approval. Such cases may be extreme but their existence indicates an ultra-cautious approach to the payment of accounts. We think that because there is an excessive regard to the notion of public accountability, too much time and money are spent in chasing last pennies.

9.8 The Banwell committee recommended that local officials should be given more discretion (para 9.7) but little progress has been made. Accounts are not being settled any more speedily because, even where individuals have been given greater discretion, it is still common to require the approval of a council committee. We support the Banwell committee's recommendation and stress the need to give and use full discretion to speed payments of accounts. *We recommend that the Ministry of Housing and Local Government should give further advice to local authorities on the administration of payments on contracts. Similar advice should be given by other government departments to public bodies with which they are concerned.*

Materials in off-site factories

9.9 The Banwell report recommended that interim payments should include the value of work done on building components which are not actually on the site but in off-site factories. With the spread of system building, action on this recommendation is to-day urgent. Interim payments for off-site components are sometimes not made because it is alleged that if a supplier goes bankrupt, the contractor will have difficulty in establishing his ownership of components not yet delivered.

9.10 For specially made components, such as structural steelwork, it should not be particularly difficult to prove ownership and we see no reason why the manufacturer should not be paid for work completed as it is completed. Ownership is not so clear in respect of standard items such as pre-cast concrete beams, metal windows, door frames etc. A new clause, 30(2A)c, was introduced in the 1966 revision of the RIBA form of contract to deal with this problem. It is too early yet to say how successful the new clause will be but in practice interim payments for materials and components not yet delivered to sites are infrequent. The new clause enables these items to be included in the interim certificate at the discretion of the architect and *we believe the Banwell committee's recommendation would be met if the practice intended by this clause were more widely used.*

Retention moneys

9.11 Retentions are money which is due to, but which is held back from, the contractor on interim payments to encourage him to honour his obligations during and after the completion of the contract, and in particular to ensure that any defects will be put right. The level of retentions commonly used with the RIBA form is 10 per cent until a sum equal to 5 per cent of the total contract value has been accumulated. In practice this means that 10 per cent of amounts due to the contractor are withheld during the first half of the contract and that nothing further is deducted during the second half. In CCC/Wks/1 the percentage is 5 per cent until a total of 3 per cent of the contract sum has been retained. The Banwell committee considered that the level of retentions specified in CCC/Wks/1 was to be preferred where selective tendering was used. The committee further suggested that where the contractor was carefully chosen retention money could be abolished (para. 9.11).

9.12 In many cases retention money is not being used for the purposes for which it is ostensibly required but to try to ensure that work is completed by the contractor. It is a blunt and clumsy instrument for this purpose: it falls equally on all contractors, including the majority who need no special encouragement to complete, and it is doubtful whether it is an effective inducement to the others. Moreover, the liability of the contractor with regard to making good any defects in the work is defined in the conditions of contract and it is not necessary for large sums of money to be retained to ensure this. Furthermore the abolition of retentions would greatly simplify contract documents and payment procedures. On the other hand there might be some increase in litigation if retentions were entirely eliminated.

9.13 Another aspect is that the system leads to a number of problems and anomalies. Main contractors are charged retentions on the total value of certified work done, including the value of work done by sub-contractors. It is up to the main contractor to deduct retentions from amounts due to his sub-contractors. Nominated[1] sub-contractors completing their work in the early stages of the contract will have reached the 5 per cent retention limit (see para 9.11) while the main contractor is still being charged 10 per cent on the total amount. The level of retention on the main contractor may therefore considerably exceed 10 per cent of the value of his own work at that stage. In the second half of the contract he will recoup his position because no further retentions are being accumulated by the client in respect of the contract as a whole while the main contractor is charging retentions on sub-contractors in the later trades. It can readily be seen that when a contract requires a number of nominated sub-contractors each arriving on the site and completing his work at different times there is considerable complexity in adhering to the retentions formula suggested in the contract. Nevertheless despite the difficulties we believe that special care should be taken to ensure that the level of retentions levied on all sub-contractors is appropriate to their own contracts irrespective of what the main contractor is paying on his. *But above all we recommend that so long as there are retentions the system should be greatly simplified.*

9.14 A further problem is that the early sub-contract trades may not receive payment of retention money due to them until the expiry of the defects period of the main contract even though their own work has long since been completed. Clause 27e of the RIBA form gives the architect discretion to release retention money to nominated sub-contractors.

[1]The problem does not arise when the sub-contractor is non-nominated because under the terms of the buff form (clause 11b) the proportion of retentions levied on the sub-contract is the same as that on the main contract. In practice it is frequently at a flat 10 per cent rate.

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There is no similar provision for non-nominated sub-contractors. *Subject to the client being suitably indemnified against defects in sub-contract work, we believe that in the interests of improving the money flow the* ICT *should consider makng clause 27e mandatory and that appropriate provision for releasing retentions to non-nominated sub-contractors should be included in any standard form which may be drawn up.*

9.15 On balance we feel, taking all tbese factors into account, that the long term aim sbould be the abolition of retention money, as recommended in 1963 by a sub-committee of the National Joint Consultative Committee. *As a first step we recommend that the* ICT *make an immediate reduction in the level of retentions suggested by the* RIBA *form, and that further reductions be progressively introduced. When the level has fallen to a low figure the* NJCC *should again consider whether retentions should be abandoned altogether.*

Maintenance and performance bonds

9.16 The use of maintenance and performance bonds has been declining as selective tendering has been increasing. Altbough some local authorities still use these bonds such use is not of major concern to the efficiency of the industry. As selective tendering increases—and it is the positive encouragement of this ratber than elimination of bonds whicb we most strongly advocate—so will the practice of asking for maintenance and performance bonds dwindle.

Bonuses and incentives

9.17 The Banwell report does not positively recommend bonuses for early completion but merely states that direct bonuses should not be opposed. In a report[1] by the working party of the Economic Development Committee for Civil Engineering on costs and productivity in road construction it was concluded that although it ought to be practicable to design a system of incentives for early completion, there are a good many impediments in tbe way and progress is likely to be slow. If this is so in the relatively homogeneous field of road construction where there are few sub-contractors and wbere the Ministry of Transport is tbe single major client, it is a good deal less likely that the development of incentives for early completion is a worthwhile proposition for building.

9.18 While therefore we can report no progress with the development of bonuses and incentives, we do not regard tbis as a particularly fruitful field for further action. One powerful incentive is the use of continuation contracts because the contractor knows that if be performs well on the initial contract he will be in a strong position to get further work. Bonuses for early completion are not easy to assess hecause of the interdependence between the various members of the building team, and they are even more difficult to allocate. *We think that the proper incentive for consistently good work should be the retention of a firm on an approved list and in due course its 'promotion' to a list of firms capable of doing larger and more demanding work.*

[1] *Efficiency In Road Construction* HMSO 1966.

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List of conclusions and recommendations

Chapter 1/General observations

1 The National Joint Consultative Committee should press ahead quickly with its review of membership. We believe that it should also have a full-time secretariat independent of its constituent parts. (para 1.5).

2 The representation of sub-contractors' organisations on the Joint Contracts Tribunal is an important and valuable step towards implementation of the Banwell committee's recommendation. (para 7.18). The Federation of Associations of Specialists and Sub-Contractors has not yet taken up membership because of disagreement with the tribunal over their nomination. In the interests of the industry the difficulty should be quickly resolved. (para 1.7).

3 The Minister of Public Building and Works' approach to the Federation of Associations of Specialists and Sub-Contractors on the question of joining the National Consultative Council is wholly within the spirit of the Banwell report and we would regard it as advantageous if the sub-contractors were members. (para. 1.9).

4 We have made recommendations for widening and strengthening the NJCC which if implemented will go a long way to meeting the need for improved consultative machinery. Should it not be possible to go ahead on the lines we suggest, new machinery would need to be evolved with a permanent secretariat, if necessary with government support. The Economic Development Committee should initiate appropriate action. (para 1.11).

Chapter 2/The team in design and construction

5 Copies of the Ministry of Public Building and Works' booklet 'Preparing to Build' should be circulated by the appropriate government departments to all building clients in the public sector, even at the risk of some duplication: sufficient publicity should be given to it to ensure that major clients in the private sector will also be aware of its importance. (para. 2.3).

6 The NJCC should consider how to publicise and encourage the use of documents of recommended practice (referred to in the text) in the industry and by clients. (para 2.3).

7 There should be more experiment in the early collaboration of the contractor in the design team. The Ministry of Public Building and Works should initiate experiments in the public sector and issue guidance to the industry generally. (para 2.6).

8 The Royal Institute of British Architects and Royal Institution of Chartered Surveyors should complete their review of professional rules quickly and take action which will meet the spirit of the Banwell committee report. (para 2.8).

9 (a) The Department of Education and Science, the University Grants Committee and the various professional institutions should try to ensure that training in the several disciplines of the building industry takes place within the same establishment, and where possible with common syllabuses or parts of syllabuses. (para 2.13).

(b) The RIBA should take a lead in setting up a clearing house between the various professional institutions for the exchange of information on educational policy and developments in joint training. (para 2.13).

(c) The NJCC should take the initiative in reconvening its sub-committee on post qualification training and include on it representatives of the Council of Engineering Institutions; and it should consider the establishment of a management college for the whole industry along the lines of the Ashorne Hill Management College organised and run by the steel industry. (para 2.13)

10 The Ministry of Public Building and Works should consider the preparation of a special version for statutory undertakers of its handbook 'Preparing to Build'. (para 2.19).

11 The NFBTE should advise its members that it is in their own interests to have explicit programmes for their work and it should given guidance on the best methods: the benefits would extend well beyond payment for variations. (para 2.24).

12 The Joint Contracts Tribunal should consider the operation of clause 11 of the RIBA form to see whether its intentions are being met in practice: if necessary clause 11 should be revised. (para 2.25).

13 The JCT should examine the feasibility of a contractual solution to variations. (para 2.26).

Chapter 3/Appointing the contractor

14 The Ministry of Housing and Local Government should issue a further circular to local authorities urging greater use of selective tendering, especially for smaller housing schemes. (para 3.4).

15 The Department of Education and Science should draw the attention of local education authorities to the need to reduce the amount of open tendering on small school contracts. (para 3.5).

16 The Department of Education and Science and the University Grants Committee should be given greater freedom to approve appointment of contractors by unorthodox methods. (para 3.6).

17 Hospital boards should adhere more strictly to the size of select lists recommended by the Ministry of Health. (para 3.7).

18 Hospital boards should be given greater discretion to increase the proportion of work let by unorthodox methods. (para 3.7).

19 The Ministry of Housing and Local Government should urge all local authorities, which have not already done so, to alter their standing orders in accordance with the new model. (para 3.12).

20 There should be much more experiment by the

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professions, central government and local authorities in serial contracting. The Ministry of Public Building and Works' booklet 'Early Selection of Contractors and Serial Tendering' should be given wide circulation. (para 3.18).

21 Provided an element of competition is retained when contracts are negotiated, there is still scope for further use of this form of selection and we recommend that central government departments should continue to urge the use of negotiated contracts on local authorities, especially for larger schemes. Future guidance by the Ministry of Public Building and Works on methods of selection should contain advice on procedures for negotiation. (para 3.20).

Chapter 4/Some notes on procedures

22 The local authorities associations, the Ministry of Housing and Local Government and the Scottish Office should encourage local authorities to adopt the practices outlined in the guides on procedure referred to in the text. (para 4.3).

23 The Ministry of Public Building and Works should urgently revise its booklet 'Selective Tendering for Local Authorities' to include guidance on the size of select lists; the Ministry of Housing and Local Government should strongly press its use on local authorities, particularly because of the guidance it gives on the regular review of lists. (para 4.6).

24 The Ministry of Housing and Local Government and the local authorities associations should draw the attention of local authorities to the desirability of employing standing approved lists, or ad hoc list procedure where appropriate. (para 4.7).

25 Main offenders with regard to the provision of an adequate tender period are in the private sector and we recommend that the RIBA and RICS continue to draw the attention of their members to this particular Banwell requirement. (para 4.8).

26 The Ministry of Public Buildings and Works should consider providing guidance for clients in the public sector on how to treat tenders based on alternative methods of construction. (para 4.10).

27 The lowest three firms in a competition should be notified within seven days that they are in the running and the other firms should be notified at the same time that they are not. The Ministry of Housing and Local Government should urge local authorities to adopt procedures, including delegation to officials, to enable this to be done. (para 4.12).

28 The Ministry of Housing and Local Government should bring to the attention of local authorities what is desirable practice with regard to the circulation of results of competitions; the RIBA and RICS should make it clear to their members that these practices should be generally adopted; and the Ministry of Public Building and Works should draw the attention of government departments and other public bodies to the practices which are desirable. (para 4.15).

29 The quantity surveyor should be able to insist that the main contractor with the lowest tender should submit his priced bill within two working days of its being asked for, unless there are exceptional circumstances. The NJCC should draw up a code of practice to bring this about. (para 4.16).

30 Where a local authority has reason to believe that the final cost of a scheme is likely to exceed the agreed budget, the scheme should be further discussed with the Ministry of Housing and Local Government or department concerned. Schemes which are likely to cost more than the budget should not be put out to tender because such practice merely leads to delays. (para 4.18).

31 The National Economic Development Council should give attention to the need for greater financial commitment to be attached to forward programmes of work in the public sector. (para 4.19).

32 There are three aspects in which control by the Building Regulations needs to be improved: in the scope, geographical coverage and in consistency of interpretation. Improvement will almost certainly have to take place in stages. As a first step the existing Building Regulations should be made more comprehensive in scope. Enabling legislation to bring this about should be introduced as soon as possible. (para 4.24).

Chapter 5/Conditions of contract

33 The adoption by the Government of the RIBA form (with any essential modifications for government use) is a crucial step towards more standardised contract conditions for building. Work in hand on this matter should be pressed to completion as soon as possible. (para 5.2).

34 The Ministry of Housing and Local Government and the local authorities associations should press for the widest use of standard forms of contract where these already exist and do all they can to discourage individual amendments. (para 5.4).

35 The Ministry of Public Building and Works should study in consultation with all interests how far clauses of identical effect in the RIBA and ICE forms can be written in a common language. (para 5.8).

36 The JCT should give early attention to the production of a standard form for non-nominated sub-contracts in order that the nominated and non-nominated forms of sub-contract tie in with the RIBA main form and there is consistency throughout. (para 5.10).

37 The NFBTE should invite a body representing consumer interests, such as the Consumer Council, to endorse their Model Conditions of Estimate with the objective of extending their use. (para 5.11).

Chapter 6/Bills of quantities

38 It is essential that the RICS Building Cost Information Service is drawn from as wide a sample as possible and we recommend that those public authorities which have so far refused to make information available should reconsider their decisions. (para 6.3).

39 The RICS and NFBTE should consider commissioning research on how to obtain improved cost feedback for estimating, so that bills of quantities and tendering documents can better reflect the estimator's true requirements and eventually provide a clearer understanding by the quantity surveyor, designer and contractor of the major determinants of cost. In addition, the NFBTE and RICS should jointly examine whether headway can be made on greater uniformity in the presentation and pricing of preliminaries. (para 6.4).

40 Sponsorship of cost research projects is expensive and it is important that progress is not delayed by shortage of money. If necessary the Government should help. (para 6.7).

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Chapter 7/Sub-contractors

41 We have recommended in paragraph 5.10 that the JCT should prepare a standard form of contract for non-nominated sub-contractors. When doing so it should bear in mind the need to provide appropriate protection on the lines we discuss in the text. (para 7.5).

42 The JCT should consider issuing a practice note on the subject of default to ensure that all the parties to a contract are fully aware of their rights and responsibilities. (para 7.9).

43 There is no standard form of estimate for non-nominated sub-contractors. We think tbere should be and that the NFATE, FASS and CASEC should jointly prepare one. (para 7.10).

Chapter 8/Firm price contracts

44 The Ministry of Housing and Local Government should urge local authorities to make even greater use of firm price contracts. (para 8.4).

45 The Ministry of Public Building and Works should consider giving a time limit for acceptance in the tender document for government work. If this is done the Ministry of Housing and Local Government should urge local authorities to adopt a similar procedure. (para 8.7).

46 The Construction Materials Group of the Economic Development Committee for Building should look into tbe question of firm prices for materials. (para 8.8).

Chapter 9/Payments, retentions and incentives

47 The RIBA and RICS (for contracts in the private sector), the Ministry of Housing and Local Government and the local authorities associations (for contracts undertaken by the local authorities), and the Ministry of Public Building and Works (for contracts undertaken by government departments and other public authorities) should immediately and strongly urge the widespread adoption of practices set out in para 9.5 of the Banwell report (and also summarised in the text) for improving the money flow. (para 9.2).

48 The JCT should consider making clause 27c of the RIBA form a contractual requirement on the architect. At the same time nominated sub-contractors should be required to provide receipts for payments made. (para 9.4).

49 The RIBA should continue to remind its members of their obligations under clause 27b of the RIBA form. (para 9.4).

50 The Ministry of Housing and Local Government should give further advice to local authorities on the administration of payments on contracts. Similar advice should be given by other government departments to public bodies with which they are concerned. (para 9.8).

51 The Banwell committee's recommendation on interim payments for building components would be met if the practice intended by clause 30 (2A)e of the RIBA form were more widely used. (para 9.10).

52 So long as there are retentions the systems should be greatly simplified. (para 9.13).

53 Subject to the client being suitably indemnified against defects iu sub-contract work, we believe that in the interests of improving the money flow the JCT should consider making clause 27e mandatory; and that appropriate provision for releasing retentions to non-nominated sub-contractors should be included in any standard form which may be drawn up. (para 9.14).

54 As a first step the JCT should make an immediate reduction in the level of retentions suggested by the RIBA form; further reductions should be progressively introduced. When the level has fallen to a low figure the NJCC should again consider whether retentions should be abandoned altogether. (para 9.15).

55 The proper incentive for consistently good work should be the retention of a firm on an approved list and in due course its 'promotiou' to a list of firms capable of doing larger and more demanding work. (para 9.18).

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Appendix I

A glossary of trade associetions and other main bodies referred to in the text

CASEC

The Committee of Associations of Specialist Engineering Contractors was formed in 1961 to deal with matters of common interest to industries engaged on specialist engineering work. It has four member associations namely:

The British Constructional Steelwork Association
The Electrical Contractors' Association
The Electrical Contractors' Association of Scotland
The Heating and Ventilating Contractors' Association.

FASS

The Federation of Associations of Specialists and Suh-Contractors was founded in 1943 from the former National Federation of Specialists and Sub-Contractors. The present membership consists of 25 associations. There is also an autonomous Scottish Board. The Federation's function is to deal with questions affecting the common interest of the members of its constituent associations and to concert common policies and action on them. It is not concerned with technical matters nor, except upon request, with matters affecting any one association individually. Among its members are the following associations:

The Architectural Metal Craftsmen's Association
The Association of Constructional Floor Specialists
The Association of Flooring Contractors
The British Precast Concrete Federation
The Concrete Reinforcement Steel Association
The Federation of Painting Contractors
The Federation of Piling Specialists
The Felt Roofing Contractors Advisory Board
The Flat Glass Association
The Floor Covering Contractors Association
The Mastic Asphalt Employers Federation
The Metal Fixing Association for Building Insulation
The Metal Window Association Ltd
The National Association of Lift Makers
The National Association of Shopfitters
The National Federation of Demolition Contractors
The National Federation of Master Painters and Decorators of England and Wales
The National Federation of Master Steeplejacks and Lightning Conductor Engineers
The National Federation of Plumbers and Domestic Heating Engineers (Employers)
The National Federation of Roofing Contractors
The National Federation of Terrazzo Mosaic Specialists
The National Master Tile Fixers Association
The Patent Glazing Conference
The School Furniture Manufacturers' Association Ltd
The Society of Railing and Balustrade Makers

JCT

The Joint Tribunal on the Standard Form of Building Contract was established in 1932. It is responsible for preparing and publishing the RIBA form of contract and has the following terms of reference:

'*To examine in the light of experience the forms of contract and sub-contract committed to their charge by their principals with a view to the issue of such revised editions as may be required from time to time. To consider and advise upon points of interpretation. To consider and advise upon any other matters relating to questions of contract with which the Tribunal may consider it desirable to deal.*'

The current membership of the Tribunal is made up of the following bodies:

The Royal Institute of British Architects
The National Federation of Building Trades Employers
The Roya Institution of Chartered Surveyors
The County Councils' Association
The Association of Municipal Corporations
The Greater London Council
The Urban District Councils' Association
The Rural District Councils' Association
The Scottish Building Contract Committee
The Federation of Associations of Specialists and Suh-Contractors
The Committee of Associations of Specialist Engineering Contractors

NCC

The National Consultative Council of the Building and Civil Engineering Industries is chaired hy the Minister of Puhlic Building and Works and was set up in 1944. Its terms of reference are:

'*To consider and advise the Minister of Public Building and Works on matters affecting the building and civil engineering industries, other than those normally handled by joint organisations of employers and operatives in the industries in connection with wages and conditions of employment.*'

The Council's members include the following hodies:

The National Federation of Building Trades Employers
The Federation of Civil Engineering Contractors
The Association of Consulting Engineers
The Royal Institute of British Architects
The Royal Institution of Chartered Surveyors
The Institution of Civil Engineers
The Scottish National Building Trades Federation (Employers)
The National Federation of Building Trades Operatives

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The Civil Engineering Contractors Conciliation Board
The Federation of Registered House Builders

The Ministry of Public Building and Works also holds regular meetings with the Advisory Committee of Specialists and Sub-Contractors (composed of representatives of FASS) and with the Executive Committee of the National Council of Building Materials Producers.

NFBTE

The National Federation of Building Trades Employers was established in 1878 and is the central organisation of employers in the building industry. The general objective of the Federation has changed over the years. The original purpose, which was to defend and protect members' interests, has developed gradually into the wider purpose of improving the efficiency of the industry and of working towards the establishment of procedures and conditions which will enable members to conduct their business efficiently and profitability. The NFBTE is a federal organisation comprising ten regional federations in England and Wales, two hundred and forty local associations and also the Scottish National Building Trades Federation (Employers). The following bodies are affiliated to the NFBTE:
The Federation of Registered Housebuilders
The National Federation of Plastering Contractors
The Joinery and Woodwork Employers Federation
The National Association of Shopfitters
The National Association of Scaffolding Contractors

NJCC

The National Joint Consultative Committee of Architects, Quantity Surveyors and Builders was formed in 1954.

'*To provide a medium whereby matters of national importance in which the constituent bodies are mutually interested may be discussed and any appropriate action taken; provided that no action shall be taken by the committee which would encroach upon the legitimate sphere of any constituent body, upon the functions of any other joint or tripartite body established between them, or upon the normal liaison activities established between the three constituent bodies.*'

The constituent bodies are:
The Royal Institute of British Architects
The Royal Institution of Chartered Surveyors
The National Federation of Building Trades Employers

The NJCC is in fact basically concerned with matters affecting procedure and practice in the construction industry. Direct action in this respect covers guidance to the member firms of its constituent bodies and representation to government or other interests on behalf of its constituent bodies where this has been so required.

RICS

The Royal Institution of Chartered Surveyors was founded in 1868 and has 18,827 corporate members divided into general practice, (valuation, town and country planning, building surveying *etc*) quantity surveying, agricultural surveying and land and mining surveying. The purpose of the RICS is the achievement of knowledge of the members and to promote the general interests of the profession and maintain its usefulness for the public advantage. To this end it conducts examinations, lays down codes of conduct, undertakes research projects and engages in other usual activities of organisations of a similar nature.

RIBA

The Royal Institute of British Architects was founded in 1837 and has 17,573 members in the United Kingdom, or between 85 and 90 per cent of all architects. The terms of reference under Royal Charter provide that it shall be an Institute for the: '*General advancement of civil architecture and for promoting and facilitating the acquirement of the knowledge of the various arts and sciences connected therewith*'.

These remain its basic objectives.

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Appendix 2

Members of the working party	
hairman	
Mr P G Potts	Assistant industrial director, National Economic Development Office
Mr A T Brett-Jones	Dearle and Henderson, chartered quantity surveyors
Mr D M Chaston	Chairman, David Chaston Ltd
Mr K C F Foster	Director, Charles S Foster & Sons Ltd
The Lord Holford	William Holford & Partners
Mr J P Inglis	Director, Drake and Scull Engineering Ltd
Mr L E Kent OBE	Andrews, Kent and Stone, consulting engineers
Mr I McIntyre	National Economic Development Office
Mr D C Mallam OBE	Director, Federation of Associations of Specialists and Sub-contractors
Mr R J Meddings	Town clerk and clerk of the peace, Wolverhampton
Mr W O Ulrich	Assistant secretary, Ministry of Housing and Local Government
Mr C E D Wooster	Director of building management, Ministry of Public Building and Works
Secretary	
Mr N P Pettinati	National Economic Development Office

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